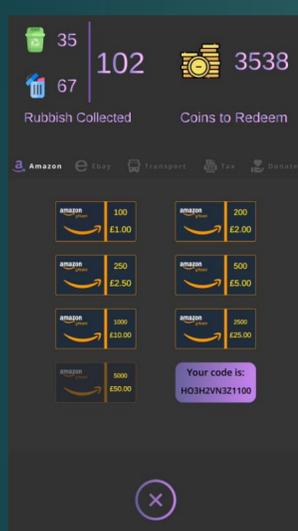
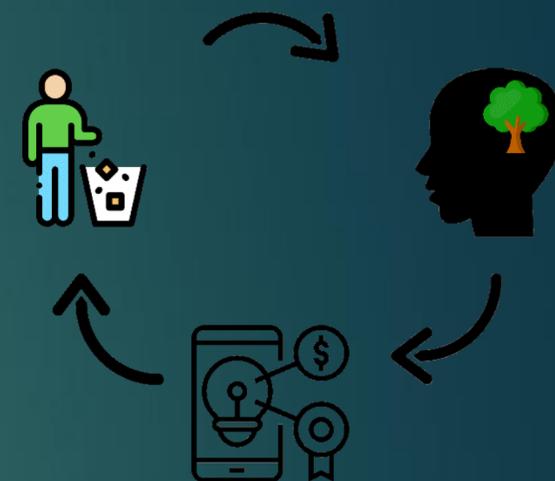


An exploration into the behavioural design of gamification and its power to motivate and trigger eco-consciousness.

Abstract

Climate change is the greatest threat to humanity that gamification is ready to battle by galvanizing people into taking action. Research has shown that gamification can affect people and morph their minds to abide by a healthier lifestyle. It demonstrated that engagement and motivation is achieved by rewarding players for their actions and allowing them to cooperate with others particularly when their common goal is significantly valuable.

This paper aims to determine how far gamification can reach to tackle something as severe as climate change and develop a prototype gamified app to help engage players in eco-friendlier choices through a reward system.



Introduction & Research Questions

Building on existing work on gamification and through the creation of the gamified app, this research is seeking answers to the following questions:

- How **gamification** could **influence** players' mentality into engaging in real-life problems?
- How user's behavioural change can design **eco-friendlier** people?
- What are the results and what immediate **rewards** will satisfy players' need to stay committed?

Development work

A **location-based Augmented Reality (AR) Gamified App** was created honouring the Core values of gamification and intending to enable players to help the environment. That achieved by:

- Promoting a greener lifestyle by **collecting rubbish** in exchange of **money**, walking to unlock games and **socializing**.
- Playing location-based **AR games** (Monster hunt)
- Interacting with random AR findings (Portal, Planting Tree)
- Competing in **leader boards**

Results & Conclusion

Gamified apps reported great user engagement, energy sustainability, healthier and greener lifestyle. BinGo attempts to unify distinct elements found on other apps. It

- makes recycling playful
- uses entertaining AR games and
- promotes healthy competition and socialization.

This study lays the groundwork for future research into

- the impact that gamification has on players' mentality towards the environment
- the development of an app like BinGo.



Methodology

The **research** process started with research on the Behavioural Design of Gamification to gain better insight into the effects of games and game design choices on the player's mentality. Data sources included:

- Books
- Articles
- Journals
- YouTube videos

The **development** tools used for BinGo are as follows:

- Unity Engine
- Mapbox
- Google SDK ARCore
- PlayFab

References

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